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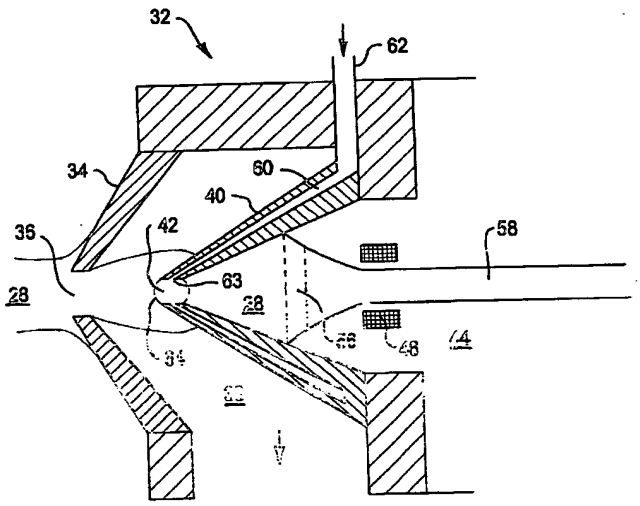
(54) Title: MASS SPECTROMETRY APPARATUS AND METHOD



(57) Abstract: A mass spectrometer in which a substance is introduced into a plasma (28) which contains analyte ions as the plasma (28) is passing through an aperture (42), for example in a skimmer cone (40) between two vacuum regions (38) and (44) so that the substance interacts with the plasma (28) thereby reducing the concentration of interfering polyatomic or multicharged ions in the plasma by reactive or collisional interactions. The substance may be supplied via passage (60) having an outlet (63) in skimmer cone (40). The invention gives improved attenuation of interfering ions because the substance is supplied directly into the plasma (28) as it is substantially radially confined by aperture (42) and before an ion beam (58) is extracted. Alternatively or additionally a substance may be supplied directly into the plasma within aperture (36) in sampling cone (34).

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